Exploring contributions to scholarship in e-learning: Weighing up the evidence

Robyn Benson
Faculty of Medicine, Nursing and Health Sciences
Monash University

Gayani Samarawickrema
Institute of Teaching and Learning
Deakin University

Recent views on the scholarship of teaching and learning have conceptualised the work of teachers as a form of inquiry, drawing on scholarly discourse about teaching and learning and communicating new understandings back to the scholarly community for peer review and evaluation. Knowledge about teaching may be based on a variety of forms of evidence, including research, evaluation, reflection, review, and the discussion or development of theoretical perspectives, ideas and concepts. This raises questions about the quality and forms of evidence about teaching which contribute to scholarship, whether these are the same in relation e-teaching and learning as they are for teaching in other contexts, and the implications of different forms of evidence for the relationship between research and teaching. In this paper we examine articles from three recent issues of three journals (two of them relating to e-learning and one to higher education in general), in order to draw some preliminary conclusions about the kind of contributions to discourse about e-learning which may be regarded as valuable in advancing the scholarship of teaching and learning.

Keywords: e-learning, evidence, scholarship of teaching and learning (SoTL)

Introduction

Ideas about the scholarship of teaching and learning (SoTL) since its introduction by Boyer (1990) have focused on its role as a form of inquiry (Hutchings & Shulman, 1999; Huber & Hutchings, 2005) where knowledge about teaching is renewed as teachers' work 'becomes public, peer-reviewed and critiqued, and exchanged with other members of our professional communities so they, in turn, can build on our work' (Shulman, 2000, p.49). These views, associated with the United States Carnegie Foundation for the Advancement of Teaching, are also linked to ideas such as the moral commitment of teachers to pass on knowledge (Hutchings, 2002) in their role as academic citizens in a democratic society (Kreber, 2006), and the importance of disciplinary perspectives about teaching (Hutchings, 2000). Among Australian contributions to the discourse, the limitations of disciplinary perspectives have been noted (Brew, 2006), and Trigwell, Martin, Benjamin and Prosser (2000) have proposed a model of the scholarship of teaching which includes: engagement with others' scholarly contributions; reflection on one's own teaching practice; communication and dissemination related to theory and practice; and a conception of teaching focused on student learning. There has also been considerable emphasis on the role of reflection in the scholarship of teaching and learning (Schön, 1995; Kreber & Cranton, 2000; Kreber, 2004, 2005, 2006).

We have assumed that e-learning is a field in the discipline of education and that the above characteristics of scholarship also apply to e-teaching and learning (Benson & Brack, forthcoming). However, there appears to have been little discussion of these ideas in discourse about e-learning, with a few exceptions such as Benson et al (2002) and Laurillard (2008). Accepting this assumption raises questions including: the nature of scholarly work; how it becomes public, peer-reviewed, critiqued and exchanged; and the criteria used to judge its quality (Benson & Brack, forthcoming), and whether these are the same for e-teaching, as an emerging field of knowledge, as they are for classroom teaching. To provide a preliminary view of the forms of evidence that are being used to disseminate knowledge about teaching in peer-reviewed journals related to e-learning, we consider contributions to three 2007 issues of two journals: Volume 23, Numbers 2-4 of *The Australasian Journal of Educational Technology (AJET)* and Volume 15, Numbers 1-3 of *ALT-J*. These are compared with contributions to Volume 26, Numbers 2-4 of *Higher*

Education Research and Development (HERD), as an example of a higher education journal which does not focus primarily on e-learning.

We recognise that forms of evidence and methods of disseminating the results of inquiry into teaching will be influenced by the aims and scope of particular publications and are much broader than those seen in peer-reviewed journals. Scholarly journals may be associated with an elitist control of knowledge that is being challenged by the democratic capacities of online environments, particularly via Web 2.0 technologies. Hence, there is a tension between the forms of evidence that may be seen as maintaining traditional academic quality and standards and others which might also be valuable in extending the scholarship of teaching and learning. While taking an evidence-based approach to the scholarship of teaching and learning (Perry & Smart, 2007) may reduce the divide between research and teaching (Brew, 2006), a converse view is that government efforts to promote the quality of research in higher education through initiatives such as the Research Assessment Exercise (RAE) in the United Kingdom and the Excellence in Research for Australia (ERA) Initiative may actually deepen the divide by concentrating faculty efforts on research rather than teaching (Conole, 2007). Although we focus on evidence from a small sample of peer-reviewed journals in this paper, we consider that alternative forms of evidence and methods of dissemination need to be explored, particularly in the context of developing the scholarship of teaching in relation to e-learning.

Forms of evidence

Table 1 summarises the forms of evidence for developing knowledge about teaching that we expected to find in our sample of journal articles. For the purpose of this short paper we apply the following narrow definitions and rationale while recognising that these could be further refined to improve clarity and rigour.

Table 1: Forms of evidence

Evidence	Description
Research	• Quantititative or qualitative, with quality of the evidence influenced by factors such as the appropriateness of the method to the research questions and the size of the study. • Size defined as: >200 (large); 100-200 (medium); <100 (small – including case studies).
Evaluation	• Quantitative or qualitative, formative or summative; size defined as for research.
Reflective practice	• Includes reflective practice (Schön, 1983) and action research (Laurillard, 2008). • Listed separately from research because of the emphasis on reflection in SoTL discourse and its focus on achieving rigour through responsiveness to practice (Schön, 1995).
Review	• Includes articles with the primary purpose of reviewing and analysing research or practice and drawing conclusions from this process (excludes reviews provided as background in articles which have another primary purpose).
Theories, ideas and concepts	• Includes conceptual articles that discuss the implications of different theoretical perspectives (Gerhard & Mayer-Smith, 2008), issues related to research or practice, or development of new ideas or frameworks to analyse or guide teaching, where the evidence emerges from the argument.

We were particularly interested in exploring whether:

- the emergent nature of knowledge about e-learning might result in a dominance of small-scale studies as teachers explored new ways of teaching (which may be valuable in building up knowledge to enrich scholarship relating to e-learning);
- there would be a large number of evaluation studies as teachers developed, trialled, evaluated and reported new teaching approaches to support e-learning;
- results from widespread implementation of students' evaluations of teaching effectiveness (Marsh, 2007) might play some part in the evidence reported; and
- there would be plentiful evidence from reflective practice and also from theories, ideas and concepts as teachers explored new approaches and ideas to facilitate e-learning.

Weighing up the evidence

Table 2 summarises the forms of evidence we identified in the selected journal sample. Where an article appeared to fit into more than one category, we classified it according to our interpretation of its main focus. For example, we categorised the article by Buchan and Swann (2007) as development of a concept rather than according to the case study method it used. As the articles by Masikunas, Panayiotidis and Burke (2007) and Gardiner, Tiggemann, Kearns and Marshall (2007) reported on evaluations of programs, they were classified as such, while we identified the article by Tynan and Garbett (2007) as the only one illustrating reflective practice due to its use of purposeful reflective practice as its method.

Table 2: Evidence used in the three journals

Evidence Quant = Quantitative; Qual = Qualitative		Journal sample (2007)		
		AJET 23(2-4)	*ALT-J* 15(1-3)	*HERD* 26(2-4)
Research	Quant (large)	4 (18.18%)	3 (18.75%)	2 (10.53%)
	Quant (medium)	Nil	1 (06.25%)	1 (05.26%)
	Quant (small)	2 (09.09%)	1 (06.25%)	1 (05.26%)
	Qual (small)	3 (13.64%)	3 (18.75%)	8 (42.11%)
	Quant + Qual (large)	1 (04.54%)	Nil	Nil
	Quant + Qual (medium)	Nil	Nil	1 (05.26%)
	Quant + Qual (small)	6 (27.27%)	2 (12.50%)	Nil
Evaluation	Quant (large)	Nil	Nil	Nil
	Quant (medium)	Nil	Nil	Nil
	Quant (small)	Nil	Nil	Nil
	Qual (small)	Nil	Nil	Nil
	Quant + Qual (large)	Nil	Nil	Nil
	Quant + Qual (medium)	Nil	1 (06.25%)	Nil
	Quant + Qual (small)	Nil	Nil	1 (05.26%)
Reflective practice		Nil	Nil	1 (05.26%)
Review		3 (13.64%)	Nil	Nil
Theories, ideas and concepts	Discussion	Nil	4 (25.00%)	3 (15.80%)
	Development	3 (13.64%)	1 (06.25%)	1 (05.26%)
Total no of articles		22 (100%)	16 (100%)	19 (100%)

Notable features of the sample were the dominance of research evidence, the minimal use of evidence from evaluation and reflective practice, and the similar patterns in uses of evidence between the two educational technology journals and *HERD,* despite some variation within categories. There was more use of quantitative research evidence in *AJET* (59.08% of the articles), compared to *ALT-J* (43.75%) and *HERD* (26.31%). Although *AJET* contained the largest number of small research studies (50.0%), 47.37% of articles in *HERD* were also small studies (with eight of them (42.11%) being small qualitative studies), followed by 37.50% in *ALT-J*. The use of evaluations (including student evaluations of teaching) to build the evidence base for effective e-learning approaches and innovations was almost non-existent, with one article in *ALT-J* and none in *AJET. HERD* contained one evaluation article and was the only journal to include a study based on reflective practice. *AJET* contained the only review articles (13.64%) but fewer articles focusing on theories, ideas and concepts (13.64%) than *HERD* (21.06%) and *ALT-J* (31.25%) , the last figure presumably related to *ALT-J's* stated intention 'to introduce a more discursive note to the journal through the inclusion of discussion pieces' (Conole, 2007, p. 187).

Conclusion

The limited variety in the forms of evidence used across the three journals may be largely explained by the criteria for this form of publication and also the small sample size. There was no clear emphasis on exploratory studies related to the emergent nature of e-learning. Arguably, *HERD* contained the most exploratory articles, followed by *ALT-J* with its emphasis on conceptual contributions. *AJET* contained the largest number of small studies but seemed to place the most value on quantitative evidence. The results highlight a need for teachers who support e-learning to weigh up the benefits of involvement in 'traditional' research activity and dissemination channels with their formal, rigorous peer reviewing, compared to a broader engagement in advancing scholarship through other ways of exchanging information, particularly using the emerging capacities that web-based technologies offer both for teaching and for building, reviewing and sharing knowledge about it in a less formal and more egalitarian way. This alternative offers the potential for collaboratively connecting the practical knowledge gained in

the use of learning technologies to theories of how we learn and how we should plan for teaching to 'move forward the collective knowledge and understanding' Laurillard (2008, p.143).

Thus, the response to the question of who does what it in relation to online scholarship in the educational technology landscape and when, where, how and why they do it, will primarily depend on where they stand on the research-teaching continuum. If research is a priority, dissemination is likely to involve publication in as many high tier journals as possible, as often as possible, for a variety of reasons, including career advancement. However, if teachers are interested in their work becoming public, peer-reviewed, critiqued and exchanged in potentially more democratic ways which take advantage of the educational technology landscape, when, where, how and why they share their knowledge will offer greater variety in the forms of evidence available. Both kinds of contribution to the discourse are important for advancing the scholarship of teaching in relation to e-learning.

References

Boyer, E. (1990). *Scholarship reconsidered: Priorities for the professoriate*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching, University of Princeton.

Benson, D.E., Haney, W., Ore, T.E., Persell, C.H., Schulte, A., Steele, J. & Winfield, I. (2002). Digital technologies and the scholarship of teaching and learning in sociology. *Teaching Sociology, 30*, 140-157.

Benson, R. & Brack, C. (forthcoming). Developing the scholarship of teaching: What is the role of e-teaching and learning? *Teaching in Higher Education.*

Brew, A. (2006). *Research and teaching: Beyond the divide*. Houndmills, UK: Palgrave MacMillan.

Buchan, J. & Swann, M. (2007). A bridge too far or a bridge to the future? A case study in online assessment at Charles Sturt University. *Australasian Journal of Educational Technology*, *23*(3), 408-434. http://www.ascilite.org.au/ajet/ajet23/buchan.html

Conole, G. (2007). What constitutes good research in e-learning – are there lessons we can draw from the Research Assessment Exercise? *ALT-J, 15*(3), 183-188.

Gardiner, M., Tiggemann, M., Kearns, H. & Marshall, K. (2007). Show me the money! An empirical analysis of mentoring outcomes for women in academia. *Higher Education Research and Development,* 25(4), 425-442.

Gerhard, G. & Mayer-Smith, J. (2008). Casting a wider net: Deepening scholarship by changing theories. *International Journal for the Scholarship of Teaching and Learning*, 2(1), http://academics.georgiasouthern.edu/ijsotl/v2n1/essays_about_sotl/Gerhard_&_Mayer-Smith/index.htm

Huber, M.T. & Hutchings, P. (2005). *Advancement of learning: Building the teaching commons*. San Francisco: Jossey-Bass.

Hutchings, P. (2000). *Opening lines: Approaches to the scholarship of teaching and learning*. Menlo Park, CA: The Carnegie Foundation for the Advancement of Teaching.

Hutchings, P. (Ed.) (2002). *Ethics of inquiry: Issues in the scholarship of teaching and learning*. Menlo Park, CA: The Carnegie Foundation for the Advancement of Teaching.

Hutchings, P. & Shulman, L.S. (1999). The scholarship of teaching. *Change, 31* (5), 10-15.

Kreber, C. (2004). An analysis of two models of reflection and their implications for educational development. *International Journal for Academic Development, 9*(1), 29-49.

Kreber, C. (2005). Charting a critical course on the scholarship of university teaching movement. *Studies in Higher Education*, *30*(4), 389-405.

Kreber, C. (2006). Developing the scholarship of teaching through transformative learning. *Journal of Scholarship of Teaching and Learning*, *6*(1), 88-109.

Kreber, C. & Cranton, P.A. (2000). Exploring the scholarship of teaching. *The Journal of Higher Education, 71*(4), 476-495.

Laurillard, D. (2008). The teacher as action researcher: Using technology to capture pedagogic form. *Studies in Higher Education, 33*(2), 139-154.

Masikunas, G. Panayiotidis, A. & Burke, L. (2007). The use of electronic voting systems in lectures within business and marketing: A case study of their impact on student learning. *ALT-J, 15*(1), 3-20.

Marsh, H.W. (2007). Students' evaluation of university teaching: Dimensionality, reliability, validity, potential biases and usefulness. In R.P. Perry & J.C. Smart (Eds.) *The scholarship of teaching and learning in higher education: An evidence-based perspective* (pp.319-383). Dordrecht: Springer.

Perry, R.P. & Smart, J.C. (Eds.) (2007). *The scholarship of teaching and learning in higher education: An evidence-based perspective*. Dordrecht: Springer.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. Aldershot: Ashgate.

Schön, D. (1995). The new scholarship requires a new epistemology. *Change,* November/December, 27-34.

Shulman, L.S. (2000). From Minsk to Pinsk: Why a scholarship of teaching and learning? *The Journal of Scholarship of Teaching and Learning, 1*(1), 48-52.

Trigwell, K., Martin, E., Benjamin, J. & Prosser, M. (2000). Scholarship of teaching: A model. *Higher Education Research & Development, 19*(2), 155-168.

Tynan, R. B. & Garbett, D. L. (2007). Negotiating the university research culture: Collaborative voices of new academics. *Higher Education Research and Development, 25*(4), 411-424.

Author: Dr Robyn Benson is a Senior Lecturer in the Faculty of Medicine, Nursing and Health Sciences at Monash University. Email: Robyn.Benson@med.monash.edu.au
Dr Gayani Samarawickrema works as a Lecturer at the Institute of Teaching and Learning at Deakin University. Email: Gayani.Samarawickrema@deakin.edu.au

Please cite as: Benson, R. & Samarawickrema, G. (2008). Exploring contributions to scholarship in e-learning: Weighing up the evidence. In *Hello! Where are you in the landscape of educational technology? Proceedings ascilite Melbourne 2008.*
http://www.ascilite.org.au/conferences/melbourne08/procs/benson.pdf